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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,153	07/29/2003	James Robert Allen		5978
25853	7590	04/22/2005	EXAMINER	
MICHAEL TAVELLA 2051 BRIGADIER DRIVE ANCHORAGE, AK 99507			CLEMENT, MICHELLE R	
		ART UNIT	PAPER NUMBER	
		3641		

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/629,153	ALLEN ET AL.
	Examiner	Art Unit
	Michelle (Shelley) Clement	3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 27 January 2005.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Response to Arguments***

1. Applicant's arguments filed 1/27/05 have been fully considered but they are not persuasive. With regards to applicant's remarks concerning adding the term "approximately" to the claims to indicate that the density, hardness and lubricity of the claimed shot pellet art *approximately* equal to that of a lead shot pellet of the same size, this raised more issues than it clarifies. Specifically applicant's specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term "approximately" is not defined by the claims or the specification, it is not clear how close to the value one would need to be to make/and or use the claimed invention. While the term "approximately" does not automatically render a claim indefinite, applicant must have disclosed a range as part of what he regards as his invention in order for one of ordinary skill in the art to ascertain the requisite degree required by the term. *Ex parte Shea*, 171 USPQ 383. Applicant has not even disclosed the hardness or lubricity of the particular lead that applicant is using for comparison. The hardness of lead is dependant on how the lead is processed, (cold-rolled, heat treated, extruded), it is also dependant on the purity of the lead or the exact composition (is applicant's "lead" pure lead or is it common "hard lead"?). The hardness for common leads range in Brinell hardness from 3.2-26.3. Does approximately the same hardness encompass Brinell hardness of 40? Or 1? Regarding applicant's contention that "lubricity for various materials is found in published tables that are well known in the art and it is a matter to look up the lubricity of lead and then find other materials with a similar lubricity", it is noted that: 1) since applicant is contending that such tables are readily available applicant

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should have submitted them; 2) since applicant has disclosed an alloy/composition without disclosing any amounts of the composition, it would not be possible to even look up applicants "disclosed" composition or other compositions for comparison; and 3) since applicant has not provided a standard for ascertaining the degree of "approximately" one would not be able to determine what other materials qualify as "approximately the same lubricity". With regards to applicant's arguments with respect to the cited prior art have been considered but are moot in view of the new ground(s) of rejection as necessitated by applicant's amendments and as the examiner best understands them.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is not clear to the examiner what quantities and percentages of the disclosed compositions yield the claimed shot pellet comprising the claimed properties. The density, hardness and lubricity of the pellet are dependent upon the percentages of each component present in the final composition, yet applicant has not disclosed any amounts that would yield the claimed percentage. Undue experimentation would be required by one of ordinary skill in the art to determine the required percentages to yield the claimed composite having a surface hardness **approximately equal to**

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that of lead, a lubricity **approximately equal** to that of lead and a density **approximately equal** to lead. The hardness and lubricity of bismuth/tin powder are dependant on the quantities present, although applicant has claimed the hardness and lubricity **approximately equal** to that of lead, applicant's examples disclose having achieved only "an **approximate** hardness equivalent to that of lead" (pages 12 and 13). It is not clear to the examiner how close one has to be to be "approximately equal" and applicant has not stated the requisite degree. It is not clear to the examiner how one measures the lubricity of the elements to determine whether they are equal to lead and applicant has not disclosed anything concerning the lubricity besides stating that it is a desired quality.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. The language "the lubricity approximately equal to that of lead" in claim 1 is indefinite. The term language is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Since lubricity is not a property that can be objectively measured, one of ordinary skill in the art would not be able to determine what elements have a lubricity approximately **equal** to that of lead, or even what the **exact** lubricity of lead is.

7. The term "approximately" in the claims is a relative term which renders the claims indefinite. The term "approximately" is not defined by the claim, the specification does not

provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3, as the examiner can best understand and apply the terms, are rejected under 35 U.S.C. 103(a) as being unpatentable over Amick (US Patent # 6,749,802) and Satow (US Patent # 5,597,975). Amick a process for manufacturing articles, that have conventionally been produced from lead, of tungsten, including projectiles/shot (column 10, lines 13-40), the process including providing the article with a density equal to or near the density of lead (column 4, lines 10-20), the product may include a coated or uncoated core (column 9, lines 60-65). When the article is a projectile it may be jacketed by any suitable material. The jacket may be additionally or alternatively formed form one or more other metallic materials (column 10, lines 10-67). The final article is preferably non-toxic. The pellet would inherently have a size and a density. Although Amick does not expressly discuss the lubricity or hardness of the coating/jacket, or it having an outer surface having a hardness and a lubricity approximately equal to that of a lead shot pellet of the same size Satow does. Satow teaches plating small arms projectiles, for example shotgun pellets, to improve the lubricity characteristics of the shot. The thickness can vary depending on the needs. Although Satow does not expressly disclose that the coating has a

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hardness and lubricity approximately equal to that of a lead shot pellet of the same size and neither Amick nor Satow expressly disclose the coating being bismuth/tin. It would have been obvious to one of ordinary skill in the art at the time the invention was made to choose bismuth/tin, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. Amick and Satow are analogous art because they are from the same field of endeavor: small arms projectiles. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the projectile plating as taught by Satow with the projectile of Amick. The suggestion/motivation for doing so would have been to obtain a jacketed projectile with improved lubricity characteristics as suggested by Satow at column 1, lines 50-67).

Conclusion

10. It is noted that applicant has apparently submitted new drawing, Figure 2, yet no drawing was found in the record. Applicant is requested to submit another copy in response to this action.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle (Shelley) Clement whose telephone number is 571.272.6884. The examiner can normally be reached on Monday thru Thursday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571.272.6873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "M Clement".